



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

February 19, 2008

MEMORANDUM

SUBJECT: Effects Determinations for Esfenvalerate Relative to the California Red-Legged Frog and Designated Critical Habitat

FROM: Shannon Borges
ERB II
Environmental Fate and Effects Division

TO: Arthur-Jean B. Williams, Acting Director
Environmental Fate and Effects Division

Attached is the assessment of potential direct and indirect effects to the California red-legged frog (CRLF) and potential adverse modification to designated critical habitat from uses of the insecticide esfenvalerate. While the Endangered Species Act requires we assess uses of pesticides relative to any potentially affected listed species, this assessment focuses only on the CRLF, including designated critical habitat, addressing provisions of a settlement agreement entered into by the federal government to resolve claims made by plaintiffs against EPA in a court case (CBD v. EPA¹).

The attached assessment was conducted consistent with the Agency's Overview Document². Effects determinations for this assessment are summarized below:

- A "No Effect" ("NE") determination was concluded for all indoor uses because there is no exposure pathway that would reach aquatic or terrestrial-phase CRLF nor directly or indirectly alter its critical habitat. Esfenvalerate has many indoor uses and they are summarized in Section 2.4.4 of the attached document.
- A "Likely to Adversely Affect" ("LAA") determination was concluded for direct effects on the CRLF for all outdoor uses based on exceedances of LOCs for the CRLF in both aquatic and terrestrial environments. All acute aquatic LOCs for direct effects were exceeded. Acute terrestrial LOCs were exceeded for the uses with the highest single application rates and for uses with lower single rates of application but with multiple applications. Chronic LOCs were exceeded for some uses in both the aquatic and terrestrial environments.

¹ Settlement agreement of October 20, 2006: Center for Biological Diversity v. United States Environmental Protection Agency. Civ. No: 02-1580-JSW(JL)).

² Overview of the Ecological Risk Assessment: Process in the Office of Pesticide Programs, U.S. Environmental Protection Agency: Endangered and Threatened Species Effects Determinations: January 23, 2004.

- For all outdoor uses, an “LAA” determination was concluded for the aquatic- and terrestrial-phase CRLF based on RQs that exceed of LOCs for food sources (invertebrates, fish, amphibians, mammals, and frogs) of the CRLF resulting in indirect effects to the CRLF and effects to its designated Critical Habitat. A “Not Likely to Adversely Affect” (“NLAA”) determination was concluded for indirect effects to the CRLF and its designated Critical Habitat for all outdoor uses based on the risk to plants in the terrestrial and aquatic environment. EFED does not have plant toxicity data to estimate risk to plants; however, based on studies available in the ECOTOX database, supplemental information gathered in a mesocosm study submitted to OPP, and from field studies, effects on plants are expected to be unlikely.
- Table 1-1 of the executive summary of the attached document provides a more detailed account of the effects determination.

As required by the Alternative Consultation Agreement EPA entered into with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (Services), I have been trained by the Services to make such determinations.

Please let me know if you have any questions regarding this assessment and effects determination for esfenvalerate relative to the CRLF and its designated critical habitat.

cc: Steven Bradbury
Debbie Edwards

Attachments